

Serial No. 10/688,694
Amendment Under 37 CFR §1.111
Response to Office Action dated May 11, 2006

Amendment to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-29 (cancelled).

30 (new). A method of forming a film from a polychlorotrifluoroethylene (PCTFE) polymer, said method comprising the steps of :

- a) extruding molten PCTFE polymer onto a casting roll maintained at temperature in the range of about 100 to about 175 °F;
- b) cooling said PCTFE polymer to a temperature below its melting point on said casting roll to form a film that is crystalline, said film having a crystallinity of from about 20 to about 30% as measured by X-ray diffraction; and
- c) monoaxially orienting said PCTFE polymer film having said crystallinity of from about 20 to 30% by stretching said film between at least one relatively slow draw roll and at least one relatively fast draw roll at a stretch ratio of from about 1.5:1 to 5:1 while holding said film under tension to form an oriented film having a thickness of from about 0.2 to about 5 mils, with the temperature of said relatively slow draw roll being in the range of about 75 to about 200 °F and the temperature of said relatively fast draw roll being in the range of about 200 and 240 °F; and
- d) collecting said oriented PCTFE polymer film;

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whereby the resulting PCTFE film has a water vapor transmission rate per mil of film of less than about 0.015 g/100 in²/day as measured by ASTM F1249 at 37.8 °C and 100% RH.

31 (new). The method of claim 30 wherein said PCTFE polymer comprises a homopolymer.

32 (new). The method of claim 30, wherein said PCTFE polymer comprises a copolymer.

33 (new). The method of claim 30, wherein said PCTFE polymer film is oriented at a stretch ratio of from about 2:1 to about 3:1.

34 (new). The method of claim 30, wherein said PCTFE polymer film is oriented at a stretch ratio of from about 2.1 to about 2.5:1.

35 (new). The method of claim 30, including the step of passing said film from said casting roll over a preheat roll maintained at a temperature of from about 50 to about 250°F.

36. The method of claim 30 wherein said oriented film has a thickness of from about 0.5 to about 2 mils.

37 (new). An in-line method of forming a film from a polychlorotrifluoroethylene (PCTFE) polymer, said method comprising the steps of:

a) extruding molten PCTFE polymer onto a casting roll maintained at temperature in the range of about 100 to about 175 °F;

b) cooling said PCTFE polymer to a temperature below its melting point on said

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casting roll to form a film that is crystalline, said film having a crystallinity of from about 20 to 30% as measured by X-ray diffraction; and

c) without winding up said PCTFE polymer film, orienting said PCTFE polymer film having said crystallinity of from about 20 to about 30% by stretching said film between at least one relatively slow draw roll and at least one relatively fast draw roll at a stretch ratio of from about 1.5:1 to 5:1 while holding said film under tension to form an oriented film having a thickness of from about 0.2 to about 5 mils, with the temperature of said relatively slow draw roll being in the range of about 75 to about 200 °F and the temperature of said relatively fast draw roll being in the range of about 200 and 240 °F; and

d) collecting said oriented PCTFE polymer film;

whereby the resulting PCTFE film has a water vapor transmission rate per mil of film of less than about 0.015 g/100 in²/day as measured by ASTM F1249 at 37.8 °C and 100% RH.

38 (new). The method of claim 37, wherein said PCTFE polymer film is oriented at a stretch ratio of from about 2:1 to about 3:1.

39 (new). The method of claim 37, wherein said PCTFE polymer film is oriented at a stretch ratio of from about 2.1 to about 2.5:1.